



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,149	03/10/2004	Katsunori Komori	10873.1419US01	5537
7590 07/13/2007 HAMER SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902-0902 MINNEAPOLIS, MN 55402			EXAMINER MARTIN, ANGELA J	
			ART UNIT 1745	PAPER NUMBER
			MAIL DATE 07/13/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/798,149

Applicant(s)

KOMORI ET AL.

Examiner

Angela J. Martin

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office Action is responsive to the Remarks filed on April 26, 2007. The Applicant stated that the tertiary reference, "Komori has an effective prior art date no earlier than the June 26, 2003 filing date of the application that is the subject of the publication. The present application claims a 35 USC 119 priority date of March 14, 2003. The verified translation of the priority application was filed previously; a copy is filed herewith for the Examiner's case of reference. Therefore, Komori does not qualify as prior art and the rejection should be withdrawn." However, a new rejection is presented for the following reasons of record.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asahina et al., U.S. Pat. No. 6,939,642 B2, in view of Okamoto et al., U.S. Pat. No. 5,780,180.

Rejection of claims 1-6, 8-13 drawn to a battery.

Asahina et al., teach a nickel metal hydride storage battery (col. 6, lines 4-6) comprising a case (abstract), a group of electrode plates in the case, wherein the case

Art Unit: 1745

comprises a main body having a hole and a lid for closing the hole (col. 3, lines 12-17; col. 6, lines 12-19); the case comprises a first portion made of a metal or a laminate of a metal and a resin, and a second portion made of a resin without metal present (col. 7, lines 65-67 and col. 8, lines 1-11). It teaches one resin layer (col. 15, lines 43-58).

Okamoto et al., teach a polymer alloy of polyphenylene ether (col. 2, lines 22-35). It teaches a resin thickness of 2 mm (col. 3, lines 65-67 and col. 4, line 1). It teaches the battery case made of 20-60 wt% polyphenylene ether (abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the teachings of Okamoto et al., into the teachings of Asahina et al., because Okamoto et al., teaches the recited resins in the Application and the amount of resin in the battery case. Although the prior art of record do not teach the relative percentages of areas of the portions of the battery case, the hydrogen permeability coefficient, the equilibrium hydrogen desorption pressure, the capacity of the battery, the area per cell of the battery, these ranges would have been obvious to one of ordinary skill in the art at the time the invention was made because discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Additionally, since the three references of record have the same assignee (Matsushita Electric Industrial Co., Ltd.) as the Application, these characteristics would likely be inherent.

3. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asahina et al., U.S. Pat. No. 6,939,642 B2, in view of Arai et al., U.S. Pat. No. 6,528,202 B1.

Art Unit: 1745

Asahina et al., teach a battery as described above.

Arai et al., teach the advantages of employing polypropylene and polyphenylene ether as the resin in the battery case col. 4, lines 24-28).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the teachings of Arai et al., or Morishita et al., into the teachings of Asahina et al., because Arai et al., teach the battery case made out of polypropylene and polyphenylene ether, which are advantageous because "they are repellent against the electrolyte" (col. 4, lines 24-28)

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Morishita et al., U.S. Pat. No. 5,747,186 teach a battery case comprising polypropylene and polyphenylene ether as an alloy.

### ***Response to Arguments***

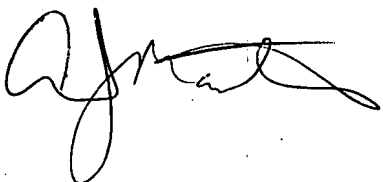
5. Applicant's arguments with respect to above claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AJM

A handwritten signature in black ink, appearing to read 'AJM', with a stylized flourish extending from the end.